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PATENT  
Customer Number 22,852  
Attorney Docket No. 07705.0001-01000

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

ZAMBROWICZ et al.

Serial No.: 10/797,613

Filed: March 9, 2004

For: VECTORS FOR GENE  
MUTAGENESIS AND GENE  
DISCOVERY

)  
) Confirmation No. 3971  
)  
) Group Art Unit: 1632  
)  
) Examiner: Not Yet Assigned  
) Prior Examiner: S. Chen  
)  
)  
)

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

**INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. § 1.97(b)**

Pursuant to 37 C.F.R. §§ 1.56 and 1.97(b), applicants bring to the attention of the Examiner the documents listed on the attached Form PTO 1449. This Information Disclosure Statement is being filed, to the undersigned's knowledge, before the mailing date of a first Office Action on the merits for the above-referenced application.

Applicants enclose copies of the ten (10) of the listed documents. Copies of the remainder of the listed documents were previously submitted or cited by the Examiner in parent U.S. Application No. 09/443,282, filed November 19, 1999, upon which applicants rely for the benefits provided in 35 U.S.C. § 120.

Applicants respectfully request that the Examiner consider the listed documents and indicate that they were considered by making appropriate notations on the attached form.

This submission does not represent that a search has been made or that no better art exists and does not constitute an admission that each or all of the listed documents are material or constitute "prior art." If the Examiner applies any of the documents as prior art against any claim in the application and applicants determine that the cited documents do not constitute "prior art" under United States law, applicants reserve the right to present to the office the relevant facts and law regarding the appropriate status of such documents.

Applicant further reserves the right to take appropriate action to establish the patentability of the claimed invention over the listed documents, should one or more of the documents be applied against the claims of the present application.

If there is any fee due in connection with the filing of this Statement, please charge the fee to Deposit Account No. 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,  
GARRETT & DUNNER, L.L.P.

Dated: July 15, 2004

By: 

Rebecca B. Scarr  
Reg. No. 47,057  
Customer No. 22,852

# INFORMATION DISCLOSURE CITATION

OMB No. 0651-0011



Atty. Docket No. 07705.0001-01000	Appln. No. 10/797,613
Applicant Brian ZAMBROWICZ et al.	
Filing Date March 9, 2004	Group: 1632

Examiner Initial*	Copy Encl.†	Document Number	Issue Date	Name	Class	Sub Class	Filing Date If Appropriate
	N	4,190,496	Feb 26, 1980	Rubenstein et al.			
	N	4,683,195	Jul 28, 1987	Mullis et al.			
	N	4,683,202	Jul 28, 1987	Mullis			
	N	4,800,159	Jan 24, 1989	Mullis et al.			
	N	4,889,818	Dec 26, 1989	Gelfand et al.			
	N	4,959,317	Sep 25, 1990	Sauer			
	N	4,965,188	Oct 23, 1990	Mullis et al.			
	N	5,023,171	Jun 11, 1991	Ho et al.			
	N	5,066,584	Nov 19, 1991	Gyllensten et al.			
	N	5,075,216	Dec 24, 1991	Innis et al.			
	N	5,079,352	Jan 7, 1992	Gelfand et al.			
	N	5,091,310	Feb 25, 1992	Innis			
	N	5,104,792	Apr 14, 1992	Silver et al.			
	N	5,364,783	Nov 15, 1994	Ruley et al.			
	N	5,449,614	Sep 12, 1995	Danos et al.			
	N	5,464,764	Nov 7, 1995	Capecchi et al.			
	N	5,521,076	May 28, 1996	Mulligan et al.			
	N	5,523,226	Jun 04, 1996	Wheeler			
	N	5,625,048	Apr 29, 1997	Tsien et al.			
	N	5,641,670	Jun 24, 1997	Treco et al.			
	N	5,652,128	Jul 29, 1997	Jarvik			
	N	5,654,182	Aug 5, 1997	Wahl et al.			
	N	5,656,479	Aug 12, 1997	Petitte et al.			
	N	5,679,523	Oct 21, 1997	Li et al.			
	N	5,690,926	Nov 25, 1997	Hogan			
	N	5,733,761	Mar 31, 1998	Treco et al.			
	N	5,744,336	Apr 28, 1998	Hodges et al.			

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Examiner Initial*	Copy Encl.‡	Document Number	Issue Date	Name	Class	Sub Class	Filing Date If Appropriate
	N	5,767,336	Jun 16, 1998	Skarnes			
	N	5,789,653	Aug 4, 1998	Skarnes			
	N	5,830,707	Nov 3, 1998	Bushman			
	N	6,080,576	Jun 27, 2000	Zambrowicz et al.			
	N	6,136,566	Oct 24, 2000	Sands et al.			
	N	6,139,833	Oct 31, 2000	Burgess et al.			
	N	6,207,371 B1	Mar 27, 2001	Zambrowicz et al.			
	N	6,436,707 B1	Aug 20, 2002	Zambrowicz et al.			
	N	08/728,963		Sands et al.			Oct 11, 1996
	N	09/443,282		Zambrowicz et al.			Nov 19, 1999
	N	09/570,923		Sands et al.			May 15, 2000
	N	09/639,453		Sands et al.			Aug 15, 2000

Examiner Initial*	Copy Encl.‡	Document Number	Publication Date	Country	Class	Sub Class	Translation Yes or No
	N	WO 88/01646	Mar 10, 1988	PCT			
	N	WO 94/24301	Oct 27, 1994	PCT			
	N	WO 96/37626	Nov 28, 1996	PCT			
	Y	WO 97/20038	Jun 5, 1997	PCT			
	N	WO 97/02323	Jan 23, 1997	PCT			
	N	WO 97/06816	Feb 27, 1997	PCT			
	N	WO 98/20031	May 14, 1998	PCT			
	Y	WO 98/24918	Jun 11, 1998	PCT			
	N	WO 99/50426	Oct 7, 1999	PCT			
	Y	CA 2,274,092	Jun 3, 1999	Canada			

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Examiner Initial*	Copy Encl.†	OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)
	N	Akam, 1987, "The molecular basis for metamerism in the <i>Drosophila</i> embryo," Development 101:1-22.
	N	Akagi et al., 1997, "Cre-mediated somatic site-specific recombination in mice," Nucleic Acids Res. 25:1766-1773.
	N	Allen et al., 1988, "Transgenes as probes for active chromosomal domains in mouse development," Nature 333:852-855.
	N	Altschul et al., 1990, "Basic local alignment search tool," J. Mol. Biol. 215:403-410.
	N	Auch et al., 1990, "Exon trap cloning: using PCR to rapidly detect and clone exons from genomic DNA fragments," Nucleic Acids Res. 18(22):6743-6744.
	N	Bandyopadhyay et al., 1984, "Expression of complete chicken thymidine kinase gene inserted in a retrovirus vector," Mol. Cell. Biol. 4:749-754.
	N	Barinaga, 1994, "Knockout mice: round two," Science 265:26, 28.
	N	Barnes et al., 1993, "Anti-inflammatory actions of steroids: molecular mechanisms," TiPS Reviews 14:436-441.
	N	Bellen et al., 1989, "P-element-mediated enhancer detection: a versatile method to study development in <i>Drosophila</i> ," Genes & Development 3:1288-1300.
	N	Bier et al., 1989, "Searching for pattern and mutation in the <i>Drosophila</i> genome with a P-lacZ vector," Genes & Development 3:1273-1287.
	N	Bonadio, 1990, "Transgenic mouse model of the mild dominant form of osteogenesis imperfecta," Proc. Natl. Acad. Sci. USA 87:7145-7149.
	N	Bonnerot et al., 1992, "Capture of a cellular transcriptional unit by a retrovirus: mode of provirus activation in embryonal carcinoma cells," J. Virol. 66:4982-4991.
	N	Bosselman et al., 1987, "Replication-defective chimeric helper proviruses and factors affecting generation of component virus: expression of Moloney murine leukemia virus structural genes via the metallothionein promoter," Mol. Cell. Biol. 7:1797-1806.
	N	Botsford et al., 1992, "Cyclic AMP in prokaryotes," Microbiol. Rev. 56:100-122.
	N	Bradley, 1991, "Modifying the mammalian genome by gene targeting," Cur. Opin. Biotech. 2:823-829.
	N	Bradley et al., 1992, "Modifying the mouse: design and desire," Bio/Technology 10:534-539.
	N	Brenner et al., 1989, "Analysis of mammalian cell genetic regulation <i>in situ</i> by using retrovirus-derived 'portable exons' carrying the <i>Escherichia coli lacZ</i> gene," Proc. Natl. Acad. Sci. USA 86:5517-5521.
	N	Burke et al., 1995, "Hox genes and the evolution of vertebrate axial morphology," Development 121:333-346.

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Examiner Initial*	Copy Encl.†	OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)
	N	Bushman, 1994, "Tethering human immunodeficiency virus 1 integrase to a DNA site directs integration to nearby sequences," <i>Proc. Natl. Acad. Sci. USA</i> 91:9233-9237.
	N	Bushman et al., 1997, "Tethering human immunodeficiency virus type 1 preintegration complexes to target DNA promotes integration at nearby sites," <i>J. Virol.</i> 458-464.
	N	Campbell et al., 1997, "Totipotency or multipotentiality of cultured cells: applications and progress," <i>Phenogenology</i> , 47:63-72.
	N	Capecchi, 1994, "Targeted gene replacement," <i>Sci. Am.</i> , 270(3):52-59.
	N	Chakraborty et al., 1993, "Synthetic retrotransposon vectors for gene therapy," <i>FASEB Journal</i> 7:971-977.
	N	Chang et al., 1993, "Enrichment of insertional mutants following retrovirus gene trap selection," <i>Virology</i> 193(2):737-747.
	N	Chen et al., 1994, "Transcriptional enhancer factor 1 disruption by a retroviral gene trap leads to heart defects and embryonic lethality in mice," <i>Genes &amp; Development</i> 8:2293-2301.
	N	Chen et al., 1994, "Large exon size does not limit splicing <i>in vivo</i> ," <i>Mol. &amp; Cell. Biol.</i> , 14(3):2140-2146.
	N	Cho et al., 1976, "Revertants of human cells transformed by murine sarcoma virus," <i>Science</i> 194:951-953.
	N	Coulondre et al., 1977, "Genetic studies of the <i>lac</i> Repressor," <i>J. Mol. Biol.</i> 117:577-606.
	N	Dadoune, 1994, "The cellular biology of mammalian spermatids: a review," <i>Bull. Assoc. Anat.</i> 78:33-40.
	N	Danos et al., 1988, "Safe and efficient generation of recombinant retroviruses with amphotrophic and ecotropic host ranges," <i>Proc. Natl. Acad. Sci. USA</i> 85:6460-6464.
	N	Deng et al., 1995, "An insertional mutation in the BTF3 transcription factor gene leads to an early postimplantation lethality in mice," <i>Transgenic Res.</i> 4(4):264-269.
	N	Duyk et al., 1990, "Exon trapping: a genetic screen to identify candidate transcribed sequences in cloned mammalian genomic DNA," <i>Proc. Natl. Acad. Sci. USA</i> , 87:8995-8999.
	N	Dymecki, 1996, "A modular set of <i>Flp</i> , <i>FRT</i> and <i>lacZ</i> fusion vectors for manipulating genes by site-specific recombination," <i>Gene</i> 171:197-201.
	Y	Erlich, 1989, <u>PCR Technology: Principals and Applications of DNA Amplification</u> , Stockton Press.
	N	Evans et al., 1997, "Gene trapping and functional genomics," <i>Trends in Genetics</i> 13(9):370-374.
	Y	Forrester et al., 1996, "An induction gene trap screen in embryonic stem cells: identification of genes that respond to retinoic acid <i>in vitro</i> ," <i>Proc. Natl. Acad. Sci. USA</i> 93:1677-1682.

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	N	Friedrich et al., 1991, "Promoter traps in embryonic stem cells: a genetic screen to identify and mutate developmental genes in mice," <i>Genes &amp; Development</i> 5:1513-1523.
	N	Friedrich et al., 1993, "Insertional Mutagenesis by Retroviruses and Promoter Traps in Embryonic Stem Cells," in <u>Methods in Enzymology Volume 225</u> , P.M. Wassarman et al. eds., Academic Press, Inc., San Diego, pp 681-701.
	N	Frohman et al., 1988, "Rapid production of full-length cDNAs from rare transcripts: Amplification using a single gene-specific oligonucleotide primer," <i>Proc. Natl. Acad. Sci. USA</i> 85:8998-9002.
	N	Frohman, 1994, "On beyond classic RACE (Rapid Amplification of cDNA Ends)," <i>PCR Methods and Applications</i> , Manual Supplement, Cold Spring Harbor Lab., 4:S40-S58.
	N	Furth et al., 1994, "Temporal control of gene expression in transgenic mice by a tetracycline-responsive promoter," <i>Proc. Natl. Acad. Sci. USA</i> , 91:9302-9306.
	N	Gasca et al., 1995, "Characterization of a gene trap insertion into a novel gene, <i>cordon-bleu</i> , expressed in axial structures of the gastrulating mouse embryo," <i>Dev. Genet.</i> 17:141-154.
	N	GENBANK Accession No. J01636, 1993
	N	Goff, 1987, "Insertional Mutagenesis to Isolate Genes," in <u>Methods in Enzymology Volume 151</u> , S.L. Berger et al. eds., Academic Press, Inc., San Diego, pp. 489-502.
	N	Goff, 1987, "[52] Gene isolation by retroviral tagging," in <u>Methods in Enzymology Volume 152</u> , S.L. Berger et al. eds., Academic Press, Inc., San Diego, pp. 469-481.
	N	Gogos et al., 1996, "Gene trapping in differentiating cell lines: regulation of the lysosomal protease cathepsin B in skeletal myoblast growth and fusion," <i>J. Cell Biol.</i> 134(4):837-847.
	N	Gogos et al, 1997, "Selection for retroviral insertions into regulated genes," <i>J. Virol.</i> 71(2):1644-1650.
	N	Gossler et al., 1989, "Mouse embryonic stem cells and reporter constructs to detect developmentally regulated genes," <i>Science</i> 244:463-465.
	N	Goulaouic et al., 1996, "Directed integration of viral DNA mediated by fusion proteins consisting of human immunodeficiency virus type 1 integrase and <i>Escherichia coli</i> LexA Protein," <i>J. Virol.</i> 70:37-46.
	N	Graham et al., 1991, "Chapter 11: Manipulation of Adenovirus Vectors," in <u>Methods in Molecular Biology, Vol. 7: Gene Transfer and Expression Protocols</u> , E.J. Murray ed., pp. 109-128.
	N	Gruber et al., 1996, "Expression of the <i>Volvox</i> gene encoding nitrate reductase: Mutation-dependent activation of cryptic splice sites and intron-enhanced gene expression from a cDNA," <i>Plant Molecular Biology</i> 31:1-12.
	N	Haas et al., 1993, "TnMax - a versatile mini-transposon for the analysis of cloned genes and shuttle mutagenesis," <i>Gene</i> 130:23-31.

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	N	Han et al., 1997, "Activation of the transcription factor MEF2C by the MAP kinase p38 in inflammation," Nature 386:296-299.
	N	Hélène, 1991, "The anti-gene strategy: control of gene expression by triplex-forming-oligonucleotides," Anticancer Drug Des. 6:569-584.
	N	Helene et al., 1992, "Control of gene expression by triple helix-forming oligonucleotides," Annals N.Y. Acad. Sci. 660:27-36.
	N	Hicks et al., 1997, "Functional genomics in mice by tagged sequence mutagenesis," Nature Genetics 16(4):338-344.
	N	Hope, 1991, "'Promoter trapping' in <i>Caenorhabditis elegans</i> ," Development 113:399-408.
	N	Hotfilder et al., 1994, "Isolation of developmentally-regulated genes from a hemotapoeitic progenitor-cell line using a retroviral gene-trap-vector," J. Cellular Biochemistry S18A:11.
	N	Houghten et al., 1991, "Generation and use of synthetic peptide combinatorial libraries for basic research and drug discovery," Nature 354: 84-86.
	N	Ingraham et al., 1990, "A family of POU-domain and Pit-1 tissue-specific transcription factors in pituitary and neuroendocrine development," Annu. Rev. Physiol. 52:773-791.
	Y	Innis et al., 1990, <u>PCR Protocols: A Guide to Methods and Applications</u> , Academic Press.
	N	Inoue et al., 1983, "Rat mutant cells showing temperature sensitivity for transformation by wild-type moloney murine sarcoma virus," Virology 125:242-245.
	N	Jönsson et al., 1996, "Use of a promoter-trap retrovirus to identify and isolate genes involved in differentiation of a myeloid progenitor cell line <i>in vitro</i> ," Blood 87(5):1771-1779.
	N	Kang et al., 1997, "Dicistronic tagging of genes active in embryonic stem cells of mice," Mol. Cells 7(4):502-508.
	N	Katz et al., 1996, "Targeting of retroviral integrase by fusion to a heterologous DNA binding domain: <i>In vitro</i> activities and incorporation of a fusion protein into viral particles," Virology 217:178-190.
	N	Kerr et al., 1989, "Transcriptionally defective retroviruses containing <i>lacZ</i> for the <i>in situ</i> detection of endogenous genes and developmentally regulated chromatin," Cold Springs Harbor Symposia on Quantitative Biology Vol. LIV:767-776.
	N	Khan et al., 1990, "Retroviral integrase domains: DNA binding and the recognition of LTR sequences," Nucl. Acids Res. 19:851-860.
	N	Kirchner et al., 1995, "Requirement of RNA polymerase III transcription factors for <i>in vitro</i> position-specific integration of a retroviruslike element," Science 267:1488-1491.
	N	Kozak, 1989, "The scanning model for translation: an update," J. Cell. Biol. 108:229-241.

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	N	Kulkosky et al., 1995, "Activities and substrate specificity of the evolutionarily conserved central domain of retroviral integrase," <i>Virology</i> 206:448-456.
	N	Lam et al., 1991, "A new type of synthetic peptide library for identifying ligand-binding activity," <i>Nature</i> 354: 82, 84.
	N	Levine et al., 1991, "The p53 tumour suppressor gene," <i>Nature</i> 351:453-456.
	N	Lewin, 1990, "Commitment and activation at Pol II promoters: A tail of protein-protein interactions," <i>Cell</i> 61:1161-1164.
	N	Low et al., 1994, "Glucocorticoids regulate hippocampal 11 $\beta$ -hydroxysteroid dehydrogenase activity and gene expression <i>in vivo</i> in the rat," <i>J. Neuroendocrinol.</i> 6:285-290.
	N	Maher, 1992, "DNA triple-helix formation: An approach to artificial gene repressors?," <i>Bioassays</i> 14:807-815.
	N	Markowitz et al., 1988, "A safe packaging line for gene transfer: Separating viral genes on two different plasmids," <i>J. Virol.</i> 62:1120-1124.
	N	Maruyama et al., 1981, "Characterization of flat revertant cells isolated from simian virus 40-transformed mouse and rat cells which contain multiple copies of viral genomes," <i>J. Virol.</i> 37: 1028-1043.
	N	Mathey-Prevot et al., 1984, "Revertants and partial transformants of rat fibroblasts infected with Fujinami sarcoma virus," <i>J. Virol.</i> , 50(2):325-334.
	Y	McPherson et al., 1991, <u>PCR: A Practical Approach</u> , IRL Press.
	N	Miller et al., 1995, "Target DNA capture by HIV-1 integration complexes," <i>Current Biol.</i> 5(9):1047-1056.
	N	Moreadith et al., 1997, "Gene targeting in embryonic stem cells: the new physiology and metabolism," <i>J. Mol. Med.</i> , 75:208-216.
	N	Morgan et al., 1996, "Transposon tools for recombinant DNA manipulation: Characterization of transcriptional regulators from yeast, <i>Xenopus</i> , and mouse," <i>Proc. Natl. Acad. Sci. USA</i> 93:2801-2806.
	Y	Mullins et al., "Transgenesis in nonmurine species," <i>Hypertension</i> , 22:630-633 (1993).
	N	Mullins et al., 1996, "Transgenesis in the rat and larger mammals," <i>J. Clinical Investigation in Perspective Series: Molecular Medicine in Genetically Engineered Animals</i> , 98(11, supplement):S37-S40.
	N	Natarajan et al., 1995, "A lacZ-hygromycin fusion gene and its use in a gene trap vector for marking embryonic stem cells," <i>Nucleic Acids Res.</i> 23(19):4003-4004.
	N	Niwa et al., 1993, "An efficient gene-trap method using poly A trap vectors and characterization of gene-trap events," <i>J. Biochem.</i> 113(3):343-349.

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	N	No et al., 1996, "Ecdysone-inducible gene expression in mammalian cells and transgenic mice," Proc. Natl. Acad. Sci. USA 93:3346-3351.
	N	Norton et al., 1984, "Expression of kirsten murine sarcoma virus in transformed nonproducer and revertant NIH/3T3 Cells: Evidence for cell-mediated resistance to a viral oncogene in phenotypic reversion," J. Virol. 50(2):439-444.
	N	Nussaume et al., 1995, "Analysis of splice donor and acceptor site function in a transposable gene trap derived from the maize element <i>Activator</i> ," Mol. Gen. Genet. 249:91-101.
	N	O'Banion et al., 1991, "A serum- and glucocorticoid-regulated 4-Kilobase mRNA encodes a cyclooxygenase-related protein," J. Biol. Chem. 266:23261-23267.
	N	Odell et al., 1990, "Site-directed recombination in the genome of transgenic tobacco," Mol. Gen. Genet. 223:369-378.
	N	Orkin et al., 1995, Report and Recommendation of the Panel to Assess the NIH Investment in Research on Gene Therapy.
	N	Ory et al., 1996, "A stable human-derived packaging cell line for production of high titer retrovirus/vesicular stomatitis virus G pseudotypes," Proc. Natl. Acad. Sci. USA 93:11400-11406.
	N	Oudet et al., 1978, "Nucleosome structure," Philos. Trans. R. Soc. Lond. 283:241-258.
	N	Patriotis et al., 1994, "The activated Mlvi-4 locus in Moloney murine leukemia virus-induced rat T-cell lymphomas encodes an Env/Mlvi-4 fusion protein," J. Virol., 68 (12):7927-7932.
	N	Pestov et al., 1994, "Genetic selection of growth-inhibitory sequences in mammalian cells," Proc. Natl. Acad. Sci. USA 91:12549-12553.
	N	Picksley et al., 1994, "p53 and Rb: their cellular roles," Curr. Opin. Cell. Biol. 6:853-858.
	N	Platt et al., 1994, "Independent regulation of adipose tissue-specificity and obesity response of the adipsin promoter in transgenic mice," J. Biol. Chem. 269:28558-28562.
	N	Pryciak et al., 1992, "Nucleosomes, DNA-binding proteins, and DNA sequence modulate retroviral integration target site selection," Cell 69:769-780.
	N	Ptashne et al., 1990, "Activators and targets," Nature 346:329-331.
	N	Rao et al., 1996, "Lamin proteolysis facilitates nuclear events during apoptosis," J. Cell Biol. 135:1441-1455.
	N	Reddy et al., 1991, "Retrovirus promoter-trap vector to induce <i>lacZ</i> gene fusions in mammalian cells," J. Virol. 65:1507-1515.
	N	Reddy et al., 1992, "Fluorescence-activated sorting of totipotent embryonic stem cells expressing developmentally regulated <i>lacZ</i> fusion genes," Proc. Natl. Acad. Sci. USA 89:6721-6725.
	N	Reilly et al., 1990, "Laboratory Methods: Transcription vectors that facilitate the identification and mapping of RNA splice sites in genomic DNA," DNA and Cell Biol. 9(7):535-542.

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	N	Rohdewohld et al., 1987, "Retrovirus integration and chromatin structure: Moloney murine leukemia proviral integration sites map near DNase I-hypersensitive sites," J. Virol. 61:336-343.
	N	Ryan et al., 1985, "Isolation of a simian virus 40 T-antigen-positive, transformation-resistant cell line by indirect selection," Mol. Cell. Biol. 5(12):3577-3582.
	N	Sabbatini et al., 1997, "Interleukin 1 $\beta$ converting enzyme-like proteases are essential for p53-mediated transcriptionally dependent apoptosis," Cell Growth and Differentiation, 8:643-653.
	N	Sablitzky et al., 1990, "Isolation of developmentally regulated genes expressed by hematopoietic stem cells using a retroviral enhancer trap vector," J. Cell Biochem. Suppl., Symposia on Molecular and Cellular Biology, Park City, Utah, March 31 - April 6, 209 (M132).
	N	Sacks et al., 1979, "Abelson murine leukemia virus-infected cell lines defective in transformation," Virology 97:231-240.
	N	Salminen et al., 1998, "Efficient polyA trap approach allows the capture of genes specifically active in differentiated embryonic stem cells and in mouse embryos," Developmental Dynamics, US, Wiley-Liss, Inc., 212:326-333.
	N	Sandmeyer et al., 1990, "Integration specificity of retrotransposons and retroviruses," Annu. Rev. Genet. 24:491-518.
	N	Sauer et al., 1990, " $\lambda$ repressor: A model system for understanding protein-DNA interactions and protein stability," in <i>Advances in Protein Chemistry</i> , Vol. 40, C.B. Anfinsen et al. eds., Academic Press, Inc., San Diego, pp. 1-61.
	N	Sauer, 1994, "Site-specific recombination: developments and applications," Curr. Opin. Biotechnol. 5:521-527.
	N	Seamark, 1994, "Progress and emerging problems in livestock transgenesis: a summary perspective," Reprod. Fertil. Dev. 6:653-657.
	N	Sekine et al., 1989, "Frameshifting is required for production of the transposase encoded by insertion sequence 1," Proc. Natl. Acad. Sci. USA 86:4609-4613.
	N	Selten et al., 1985, "Proviral activation of the putative oncogene Pim-1 in MuLV induced T-cell lymphomas," EMBO J. 4(7):1793-1798.
	N	Shih et al., 1988, "Highly preferred targets for retrovirus integration" Cell 53:531-537.
	N	Shirai et al., 1996, "A gene trap strategy for identifying the gene expressed in the embryonic nervous system," Zoolog. Sci. 13(2):277-283.
	N	Skarnes et al., 1992, "A gene trap approach in mouse embryonic stem cells: the lacZ reporter is activated by splicing, reflects endogenous gene expression, and is mutagenic in mice," Genes Dev. 6(6):903-918.
	N	Skarnes, 1993, "The identification of new genes: gene trapping in transgenic mice," Current Opinion in Biotechnology 4:684-689.

\*Copies that are not enclosed were previously submitted by the applicants or cited by the Examiner in U.S. Patent Application No. 09/443,282.

## INFORMATION DISCLOSURE CITATION

Atty. Docket No.	07705.0001-01000	Appln. No.	10/797,613
Applicant	Brian ZAMBROWICZ et al.		
Filing Date	March 9, 2004	Group:	1632

Examiner Initial*	Copy Encl.†	OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)
	N	Smithies et al., 1985, "Insertion of DNA sequences into the human chromosomal $\beta$ -globin locus by homologous recombination," <i>Nature</i> 317:230-234.
	N	Songyang et al., 1993, "SH2 Domains Recognize Specific Phosphopeptide Sequences," <i>Cell</i> 72:767-778.
	N	Steinberg et al., 1978, "Isolation and characterization of T Antigen-negative revertants from a line of transformed rat cells containing one copy of the SV40 Genome," <i>Cell</i> 13:19-32.
	N	Stephenson et al., 1973, "Characterization of morphologic revertants of murine and avian sarcoma virus-transformed Cells," <i>J. Virol.</i> , 11(2):218-222.
	N	Theiler, 1989, "24 Days Post Partum," in <u>The House Mouse, Atlas of Embryonic Development</u> , Springer-Verlag, New York, pp. 148-149.
	N	Thomas et al., 1987, "Site-directed mutagenesis by gene targeting in mouse embryo-derived stem cells," <i>Cell</i> 51:503-512.
	N	Thompson et al., 1989, "Germ line transmission and expression of a corrected HPRT gene produced by gene targeting in embryonic stem cells," <i>Cell</i> 56:313-321.
	N	Valentine et al., 1994, "Glucocorticoids repress basal and stimulated manganese superoxide dismutase levels in rat intestinal epithelial cells," <i>Gastroenterology</i> 107:1662-1670.
	N	Varmus et al., 1981, "Retroviruses as mutagens: insertion and excision of a nontransforming provirus alter expression of a resident transforming provirus," <i>Cell</i> , 25:23-36.
	N	Varmus et al., 1981, "Revertants of an ASV-transformed rat cell line have lost the complete provirus or sustained mutations in <i>src</i> ," <i>Virology</i> , 108:28-46.
	N	Varmus, 1988, "Retroviruses," <i>Science</i> 240:1427-1435.
	Y	Verma et al., 1997, "Gene Therapy - promises, problems, and prospects," <i>Nature</i> 389: 239-242.
	N	Vinson et al., 1989, "Scissors-grip model for DNA recognition by a family of leucine zipper proteins," <i>Science</i> 246:911-916.
	N	Vitaterna et al., 1994, "Mutagenesis and mapping of a mouse gene, clock, essential for circadian behavior," <i>Science</i> , 264:719-725.
	N	Voet and Voet, 1995, <u>Biochemistry, 2nd Ed.</u> , John Wiley & Sons, New York, pp. 944-949, 965, and 1054.
	N	von Melchner et al., 1989, "Identification of cellular promoters by using a retrovirus promoter trap," <i>J. Virol.</i> 63:3227-3233.
	N	von Melchner et al., 1992, "Selective disruption of genes expressed in totipotent embryonal stem cells," <i>Genes &amp; Development</i> 6:919-927.

\*Copies that are not enclosed were previously submitted by the applicants or cited by the Examiner in U.S. Patent Application No. 09/443,282.

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Examiner Initial*	Copy Encl.†	OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)
	N	Wang et al., 1995, "High frequency recombination between <i>loxP</i> sites in human chromosomes mediated by an adenovirus vector expressing Cre Recombinase," <i>Somatic Cell and Mol. Genet.</i> , 21(6):429-441.
	N	Wilson et al., 1986, "A frameshift at a mutational hotspot in the polyoma virus early region generates two new proteins that define T-antigen functional domains," <i>Cell</i> , 44:477-487.
	N	Wilson, 1997, "Vectors - shuttle vehicles for gene therapy," <i>Clin. Exp., Immunol.</i> 107(Suppl. 1):31-32.
	N	Wright et al., 1989, "Myogenin, a factor regulating myogenesis, has a domain homologous to MyoD," <i>Cell</i> 56:607-617.
	N	Wurst et al., 1995, "A large-scale gene-trap screen for insertional mutations in developmentally regulated genes in mice," <i>Genetics</i> 139:889-899.
	Y	Yagi et al, "Homologous recombination at c-fyn locus of mouse embryonic stem cells with use of diphtheria toxin A-fragment gene in negative selection," <i>Proc. Natl. Acad. Sci. USA</i> , 87:9918-9922 (1990).
	N	Yoshida et al., 1995, "A new strategy of gene trapping in ES cells using 3'Race," <i>Transgenic Res.</i> , 4(4):277-287.
	N	Zambrowicz et al., 1997, "Disruption of overlapping transcripts in the ROSA βgeo 26 gene trap strain leads to widespread expression of β-galactosidase in mouse embryos and hematopoietic cells," <i>Proc. Natl. Acad. Sci. USA</i> 94(8):3789-3794.
	N	Zambrowicz and Friedrich, 1998, "Comprehensive mammalian genetics: history and future prospects of gene trapping in the mouse," <i>International Journal of Developmental Biology</i> , 42:1025-1036.
	N	Zambrowicz et al, 1998, "Disruption and sequence identification of 2,000 genes in mouse embryonic stem cells," <i>Nature</i> , 392:608-611.

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